Meeting Minutes Transmittal/Approval Unit Managers' Meeting

082093

200 Area Groundwater and Source Operable Units 3350 George Washington Way, Richland, Washington March 2000

0053753

APPROVAL:	Bryan Poley, 200 Area Unit Manager, RL (A5-13)	Date	8/10/ov_
APPROVAL:	Wayne Soper, 200 Area Unit Manager, Ecology (B5-18)	Date	8-14-00
(APPROVAL:	Dennis Faulk, 200 Area Unit Manager, EPA (B5-01)	Date	9-5-06
APPROVAL:	Arlene Tortoso, Groundwater Unit Manager, RL (H0-12)	Date	8/14/00



HANFORD PROJECT OFFICE

AUG 2 9 2000

ENVIRONMENTAL PROJECTION AGENCY

082093 Meeting minutes are attached. Minutes are comprised of the following: Agenda Attachment 1 Attachment 2 Attendance Record 200 Area UMM Minutes - March 2000 Attachment 3 200-CW-1 Remedial Investigation (RI) Report Outline Attachment 4 200-TW-1 & 200-TW-2 DQO Schedule Attachment 5 Groundwater Monitoring at the 200-PO-1 Operable Unit Attachment 6 Status of RCRA Groundwater Project Activities at Tank Farms Attachment 7 200-ZP-1 Drums Stored at 200-ZP-2 Attachment 8

Pathforward for 2 Drums Stored at 200-ZP-2

Attachment 9

Prepared by:

Chloe Brewster (HO-19)

Date 4/22/00

082093

UNIT MANAGERS' MEETING AGENDA

3350 George Washington Way March 30, 2000

9:00 - 11:00 a.m. 200 Area Room 2B59

- 200-CW-1 Gable/B Pond and Ditches Cooling Water OU (30 minutes)
 - Work Plan Status
 - Re-certification of 216-B-3 Pond TSD Unit Part A
 - Status on Contained-in Determination
 - Hydrazine Sampling of IDW Approach Borehole Summary Report Status
 - Remedial Investigation Report Status
 - Report Outline
 - Data Evaluation Logic/Process
- \$200-CS-1 Chemical Sewer OU (5 minutes)
 - Work Plan Status
 - Borehole Summary Report
- 200-CW-5 U Pond/Z Ditches Cooling Water OU (5 minutes)
 - Work Plan Status
- 200-TW-1 Scavenged and 200-TW-2 OUs (5 minutes)
 - DQO Status
- 200-PW-2 Uranium-Rich Process Waste Operable Unit (5 minutes)
 - Schedule
- 200-PO-1 Operable Unit (5 minutes)

- Tank Farm Groundwater Assessments (15 minutes)
 - Status Update
- General Topics: (5 minutes)
 - FY01-03 Detailed Work Plan
 - Annual Re-evaluation of Operable Unit Prioritization
 - 200-PW-1 Pu/Organics Process Operable Unit integration with ITRD
- 200-UP-1 (5 minutes)
 - Status Update
- 200-ZP-1 (10 minutes)
 - Status Update
 - CCL4 ITRD Workshop Recap
- 200-ZP-2 (15 minutes)
 - Non-operational monitoring
 - Passive extraction monitoring

200 Area Unit Mangers Meeting 2 0 9 3 March 30, 2000 9:00 a.m. – 11:00 a.m.

3350 George Washington Way, Conference Room 2B-59

ATTENDEE	ORGANIZATION	PHONE NUMBER
Mary E. Todd	CHE	312-9030
Curt withreich	CHI	372-9586
Brenda Becker-Khalech	Ecology	736-3003
Wayny Sopre	Ecology	736-3049
TED Wooley	Fiology	736-3012
BRYAN FOCEY	DOE-RL	376-7087
Bence Fores	345	372-9242
Ron Jackson	CHI	372-9362
D. Fartle	4.P.A	
DELINEE HENCLEL	BHT	3729381
Floyd Hodges	PNVL	376-4627
3 Narbuloustile	PNNC	376-9235
Van Johnson	PIVIUL	374-0916
Jonathan Lindberg	PNNL	376-5005
Stuart Luttrell	PNNL	376-6023
Virginia Rohay	CHI	372-9100
Arlene Tortoso	Doe	373-9631
Arlene Tortoso JOAN WOOLARD	BHI	372 - 9649

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MEETING MINUTES 200 AREA GROUNDWATER AND SOURCE OPERABLE UNITS UNIT MANAGERS' MEETING --200 AREA March 30, 2000

Attendees: See Attachment #2

Agenda: See Attachment #1

Topics of Discussion:

1. 200-CW-1 Gable/B Pond and Ditches Cooling Water Operable Unit (OU) – Revision of the Part A for the 216-B-3 Main Pond has been concurred by everyone at the U.S. Department of Energy, Richland Operations Office (RL) except the deputy manager and Keith Klein. Final signatures are expected mid-next week.

Ted Wooley (Washington State Department of Ecology [Ecology]) will provide comments on the sampling and analysis instruction for the Gable pond diesel spill soil and B Pond investigation-derived waste (IDW) drums no later than 3/31/00. Hydrazine sampling is proposed to begin 4/10/00.

The 200-CW-1 Remedial Investigation (RI) Report Outline was provided and briefly reviewed. The borehole summary report will contain the analytical data. Ted Wooley (Ecology) commented that the ecological risk and modeling methodology for non-radiological (RAD) constituents need to be added to Section 4.0. A meeting will be set up with Ted to discuss the outline further. The use of the RESidual RADioactivity dose model (RESRAD) was questioned. It was noted that RESRAD will be used for surface exposure and as a screening tool to identify further modeling needed. Ted Wooley suggested including the logic (background/reasoning) for eliminating certain contaminants from consideration. Dennis Faulk, U.S. Environmental Protection Agency (EPA), was concerned that the proposed risk assessment methodology may not be following Hanford Site baseline risk assessment methodology (HSRAM). Bryan Foley, RL/Mary Todd (CH2M Hill, Hanford, Inc. [CHI]) took the action to check the baseline. Another issue was the development of distribution coefficients (K_d) and it was noted that this is currently being worked on.

An issue regarding the contents of the draft Tri-Party Agreement (TPA) change package, which was introduced at the 1/27/00 Unit Managers' Meeting, was raised. Bryan Foley (RL) is currently working with senior management (Wade Ballard, Beth Bilson, and Keith Klein) to address the milestone issue in light of funding and other constraints. EPA and Ecology prefer the complete change package be submitted with the work plan. A workshop will be planned to iron out the TPA change package issue. Dennis Faulk (EPA) prefers one feasibility study (FS) for all the 200 Areas (like the one that was done in the 100 Areas), instead of creating one for each OU.

 200-CS-1 Chemical Sewer OU – A meeting has been scheduled for 4/6/00 to discuss the resolutions to the comments received from the Nez Perce Tribe on the work plan. Brenda Becker-Khaleel (Ecology) requested a copy of the comments and resolutions when completed.

CHI will be providing data to Pacific Northwest National Laboratory (PNNL) on the borehole summary report, for which PNNL is the lead.

- 3. <u>200-CW-5 U Pond/Z Ditches Cooling Water OU</u> It was reported that Doug Sherwood (EPA) is currently reviewing the work plan. One of Doug's comments is to update the reference to the Tri-Party Agreement. EPA stated that if they approve the work plan, the milestones in the schedule are just as enforceable as a change package. It was noted that Science and Technology (S&T) has an interest in Z-11, and the information concerning this additional sampling would be added to the sampling and analysis plan but would not impact the work plan. EPA stated this would not be a problem.
- 4. <u>200-TW-1 Scavenged and 200-TW-2 Tank Waste QUs</u> The data quality objectives (DQO) workbook is in author review. The external DQO meeting is slated for the last week in April. As Zelma Jackson (Ecology) will be out of the office for two months, Wayne Soper (Ecology) will be reviewing the workbook. The 200-TW-1 & 200-TW-2 DQO Schedule was provided.
- 5. <u>200-PO-1 Operable Unit</u> The **Groundwater Monitoring at the 200-PO-1 Operable Unit** was provided and reviewed by J. Lindberg (PNNL) on the purpose of groundwater monitoring in the 200-PO-1 OU. Marv Furman (RL) is the lead for this OU. Dennis Faulk (EPA) commented that well maintenance waste needs to be addressed and well networks for all groundwater wells need to be updated.
- 6. Tank Farm Groundwater Assessments Vern Johnson (PNNL) provided and reviewed the Status of RCRA Groundwater Project Activities at Tank Farms. There are seven waste management areas, five in assessment and two in indicator evaluation mode. The annual and quarterly reports go to Ecology. EPA requested Ecology provide copies to them for review. Dennis Faulk also requested to see the sampling plans for T and TX-TY drilling activities when available. PNNL stated the annual report is on their website.
- 7. <u>General Topics</u> One of the results of the Innovative Treatment Remedial Demonstration (ITRD) was that more discussion is needed to determine the path forward.
 - Dennis Faulk (EPA) raised the concern that Environmental Restoration (ER) is carrying the facility transition waste sites, but RL is funding these. ER committee has two global policy issues: what is the risk scenario to use and how to establish points of compliance.
- 8. <u>200-UP-1</u> Shut down for Environmental Restoration Disposal Facility (ERDF). The Effluent Treatment Facility (ETF) is to receive the waste. How much is pumped will depend on how much ETF can receive. Shri covering for Zelma. A question was raised on how this will work with the five-year review. Ecology disagrees with RL conclusions and modeling. There is no consensus/approved site-wide model for UP-1. Ecology and EPA need to provide the path forward.
- 9. <u>200-ZP-1 and 200-ZP-2</u> Currently, operations are moving along. Will routinely clean, due to build-up. Well #1 lost pump, currently checking supply, or may have to procure.
 - Tritium hit in ZP-1. A concern was raised that it was thought the evaporator was not part of the tank farms but should be. Trends will be watched. D. Faulk will review. Dennis appreciated that he got notified of this.
 - The recap of the ITRD workshop was provided. Additional items for the model are needed (K_d) and there is an issue regarding the degradation rate. The scope of work to study K_d needs to be written. Other methods of characterization were revisited. A conference call is scheduled for 5/1/00 at 9 a.m. in room 2C58. Duke Engineering

provided a cost estimate on the Partitioning Interwell Tracer Test (PITT), but reevaluation is needed after additional information is received. The specific scenarios were identified to cost out. EPA indicated that as soon as they sign the letter, the operation plan will be signed for ZP-2.

Waste site discussion – Joan Woolard, Bechtel Hanford, Inc. (BHI), reported that Records of Decisions (RODs) and remedial design reports (RDRs) are being checked and any well included in these documents is covered under the waste management plan. Decon water, however, is not covered, and it was recommended that it be managed the same as purgewater. Ecology needs to provide concurrence on this. Arlene Tortoso will send email for concurrence. Joan also provided and reviewed a handout on 200-ZP-1 Drums Stored at 200-ZP-2. Six drums total are being stored at the ZP-2 site until a decision is made on the waste disposal issue. Four drums contain remediation waste. EPA concurred that these four drums are covered by the RDR waste management plan, can go to ERDF, and are not part of the current IDW waste disposal issue. A handout on Pathforward for 2 Drums Stored at 200-ZP-2 was provided to Wayne Soper (Ecology), but not reviewed. The options are to update the groundwater remediation waste plan to include the pump and treats, amend the RDRs to include waste disposal procedures, or write OU specific waste control plans. Joan reported that all wells covered/included in the RODs and/or RDRs will be started back up.

Actions:

- 1. A meeting will be set up with Ted to discuss the 200-CW-1 RI report outline further. (Action assigned to Mary Todd, CHi.)
- 2. Check the baseline risk assessment methodology to verify the 200-CW-01 RI report is following this path. (Action assigned to Bryan Foley, RL/Mary Todd, CHI.)
- 3. Ecology (Brenda Becker-Khaleel) would like to see the comments and resolutions from the Nez Perce Tribe on the 200-CS-2 Chemical Sewer OU work plan. (Action assigned to Bruce Ford/Chris Cearlock.)
- 4. EPA requested Ecology provide copies of the tank farm groundwater assessments reports to them for review (Action assigned to Wayne Soper.)
- 5. Send email to Wayne Soper, Ecology, for concurrence that decon water can be handled the same as purgewater for waste disposal. (Action assigned to Arlene Tortoso.)

200-CW-1 RI REPORT OUTLINE

1.0 INTRODUCTION

- 1.1 Purpose the purpose of the RI Report is to evaluate the data generated during the RI to determine the need to proceed with a feasibility study and to identify those constituents and site-specific considerations that need to be addressed in the FS; to support the evaluation of alternatives in the FS with regard to meeting ARARs, risk reduction, and potential significant data gaps, if any
- 1.2 Supporting Documents and RI Basis
- 1.3 Data Evaluation Methodology
 - 1.3.1 Summary of Risk Evaluation
 - 1.3.2 Summary of Modeling Approach
 - 1.3.3 Analogous Site Approach
- 1.4 Site Background Summary
 - 1.4.1 200-CW-1 Operable Unit and Representative Waste Sites
 - 1.4.2 Conceptual Models of Contaminant Distribution and Conceptual Exposure Model

2.0 INVESTIGATION APPROACH AND ACTIVITIES

- 2.1 Representative Sites
- 2.2 Investigation Activities
 - 2.2.1 Trenching
 - 2.2.2 Drilling
 - 2.2.3 Sampling
 - 2.2.4 Geophysical Logging
 - 2.2.5 Other Investigations

3.0 INVESTIGATION RESULTS

- 3.1 216-B-3 Main Pond
 - 3.1.1 Summary of Analytical Results
 - 3.1.2 Refinement of Contaminant Distribution Model
 - 3.1.3 Evaluation of Results
- 3.2 216-B-3-3 Ditch
 - 3.2.1 Summary of Analytical Results
 - 3.2.2 Refinement of Contaminant Distribution Model
 - 3.2.3 Evaluation of Results

- 3.3 216-B-2-2 Ditch
 - 3.3.1 Summary of Analytical Results
 - 3.3.2 Refinement of Contaminant Distribution Model
 - 3.3.3 Evaluation of Results
- 3.4 216-A-25 Gable Mountain Pond
 - 3.4.1 Summary of Analytical Results
 - 3.4.2 Refinement of Contaminant Distribution Model
 - 3.4.3 Evaluation of Results
- 3.5 Other Investigations
 - 3.5.1 Results
 - 3.5.2 Refinement of Contaminant Distribution Models
 - 3.5.3 Evaluation of Results

4.0 RISK EVALUATION

- 4.1 Data Screening
 - 4.1.1 Screening of Nondetects
 - 4.1.2 Screening Against Background
- 4.2 Nonradioactive Constituent Risk Methodology
 - 4.2.1 Assumptions
 - 4.2.2 Development of PRGs and Application of PRG Screening for Nonradioactive Constituents
 - 4.2.3 Inputs to Risk Calculations
 - 4.2.4 Risk Calculation Summary
 - 4.2.7 Evaluation of Results and Uncertainties
- 4.3 RESRAD Modeling Methodology
 - 4.3.1 Assumptions
 - 4.3.2 Development of PRGs and Application of PRG Screening for Radioactive Constituents
 - 4.3.3 Inputs to RESRAD Model
 - 4.3.4 RESRAD Calculation Summary
 - 4.3.5 Evaluation of RESRAD Results and Uncertainties
- 4.6 Impacts to Groundwater and Surface Water
 - 4.6.1 Methodology
 - 4.6.2 Evaluation of Results

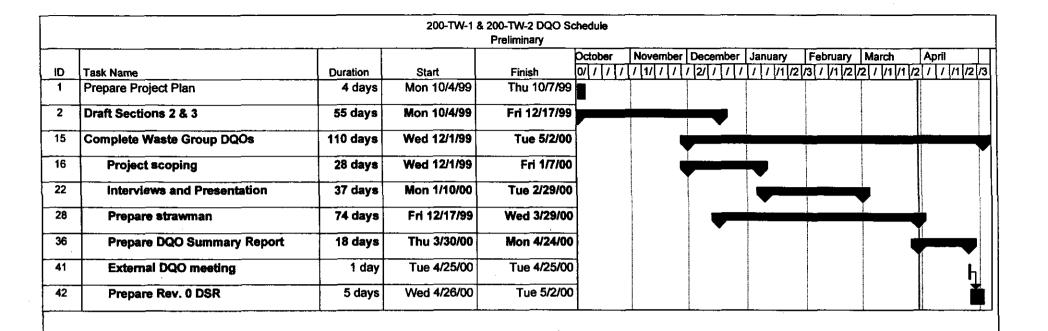
5.0 **CONCLUSIONS**

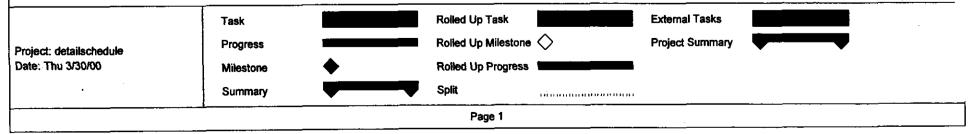
- 5.1 **General Conclusions**
 - General Summary of COCs and Risks for Representative Sites 5.1.2
 - General Summary of Results Relative to Contaminant Distribution 5.1.3 Models and Exposure Model
- Application of RI to Remaining Sites and Analogous Approach Application of RI to Feasibility Study and Path Forward 5.2
- 5.3

REFERENCES 6.0

APPENDICES

- Risk Assessment Calculation Α
- **RESRAD Modeling** В
- As needed \mathbf{C}





Groundwater Monitoring at the 200-PO-1 Operable Unit

Purpose

The purpose of groundwater monitoring for the 200-PO-1 Operable Unit (OU) is to define the concentration and extent of the three major contaminant plumes (iodine-129, nitrate, and tritium) emanating from the 200-PO-1 OU. Many of the wells sampled for the 200-PO-1 OU are also sampled for the Resource Conservation and Recovery Act (RCRA) PUREX Cribs TSD (treatment, storage, or disposal unit)(including 216-A-10, 216-A-36B, and 216-A-37-1 cribs) and Hanford Sitewide Groundwater Surveillance which have similar objectives. It is the 600 Area wells of the Hanford Sitewide Groundwater Surveillance that make up most of the wells of the PUREX Cribs/200-PO-1 OU monitoring network. Other RCRA TSDs such as the Non-Radioactive Dangerous Waste Landfill (NRDWL) at the Central Landfill facility have different objectives, but wells at those operable units are included for completeness.

Specifics of the 200-PO-1 OU well network and sampling frequency are subject to change from year to year depending on data trends, well conditions, and the requirements and data from related RCRA TSDs. However, the overall objective will continue to be met by the complimentary association of PUREX Cribs TSD, Hanford Sitewide Groundwater Surveillance, and the 200-PO-1 OU.

Scope

The groundwater monitoring plan contained herein is for the 200-PO-1 OU and is extracted entirely from PNNL-11989 (Integrated Monitoring Plan for the Hanford Groundwater Monitoring Project)(Hartman et al. 1999). Only the portions of PNNL-11989 relating to the area within or near the 200-PO-1 OU are included.

200-PO-1 Operable Unit Boundaries

The 200-PO-1 OU is bound by the 2,000 pCi/L tritium contamination plume contour as it extends eastward and southward from the source(s) located in the southeastern portion of the 200 East Area (DOE 1997)(Figure 1). The eastern boundary is the Columbia River from the Old Hanford Townsite to the 300-FF-5 Groundwater OU. The southern boundary is the northern boundary of the 300-FF-5 OU, and the northern boundary is the southern boundary of the 200-BP-5 Groundwater OU.

Wells

Well locations of the wells monitored within the 200-PO-1 OU are shown on Figure 1. Details of the 200 East Area are shown on Figures 2 and 3, the Central Landfill on Figure 4, and the 400

Area on Figure 5. Appendix A lists the wells monitored along with sampling frequency, constituents to be monitored, and other pertinent information.

Groundwater Contamination Constituents

Wells within the 200-PO-1 OU are monitored for alkalinity, gross alpha, anions, arsenic, gross beta, chromium, gross gamma, mercury, iodine-129, inductively coupled-plasma (ICP) metals, lead, phenols, strontium-90, technetium-99, total dissolved solids, total organic carbon, total organic halogens, tritium, uranium, and volatile organics depending on well location and project. However, the principle constituents of concern for the 200-PO-1 OU are iodine-129, nitrate, and tritium. Constituent assignments for each well are listed in Appendix A.

Sampling Frequency

Wells within the 200-PO-1 OU are sampled monthly, quarterly, semiannually, annually, or once every three years depending on location and associated project. For instance, wells monitored under RCRA are sampled semiannally or quarterly such as wells surrounding the PUREX Cribs (quarterly and semiannually) (Figure 2) or the Nonradioactive Dangerous Waste Landfill (NRDWL) (semiannually) (Figure 4). Several guard wells southeast, south, and east of the 200 East Area and along the Columbia River (Figure 3) are sampled annually. Many of the remaining 600 Area wells are sampled once every third year because the contaminant plumes in those localities change very little from year to year. Appendix A lists the sampling frequency for wells sampled within the 200-PO-1 OU.

Water-Level Monitoring

Water levels are measured annually within a single month by The Hanford Site Groundwater Monitoring Project at wells within the area of the 200-PO-1 OU, as well as over the entire Hanford Site.

References

U.S. Department of Energy (DOE). 1997. RCRA Facility Investigation Report for the 200-PO-1 Operable Unit. DOE/RL-95-100, Rev. 1. Richland Operations Office, Richland, Washington.

Hartman, M.J., P.E. Dresel, D.R. Newcomer, and E. C. Thornton. 1999. *Integrated Monitoring Plan for the Hanford Groundwater Monitoring Project*. PNNL-11989, Rev. 1. Pacific Northwest National Laboratory, Richland, Washington.

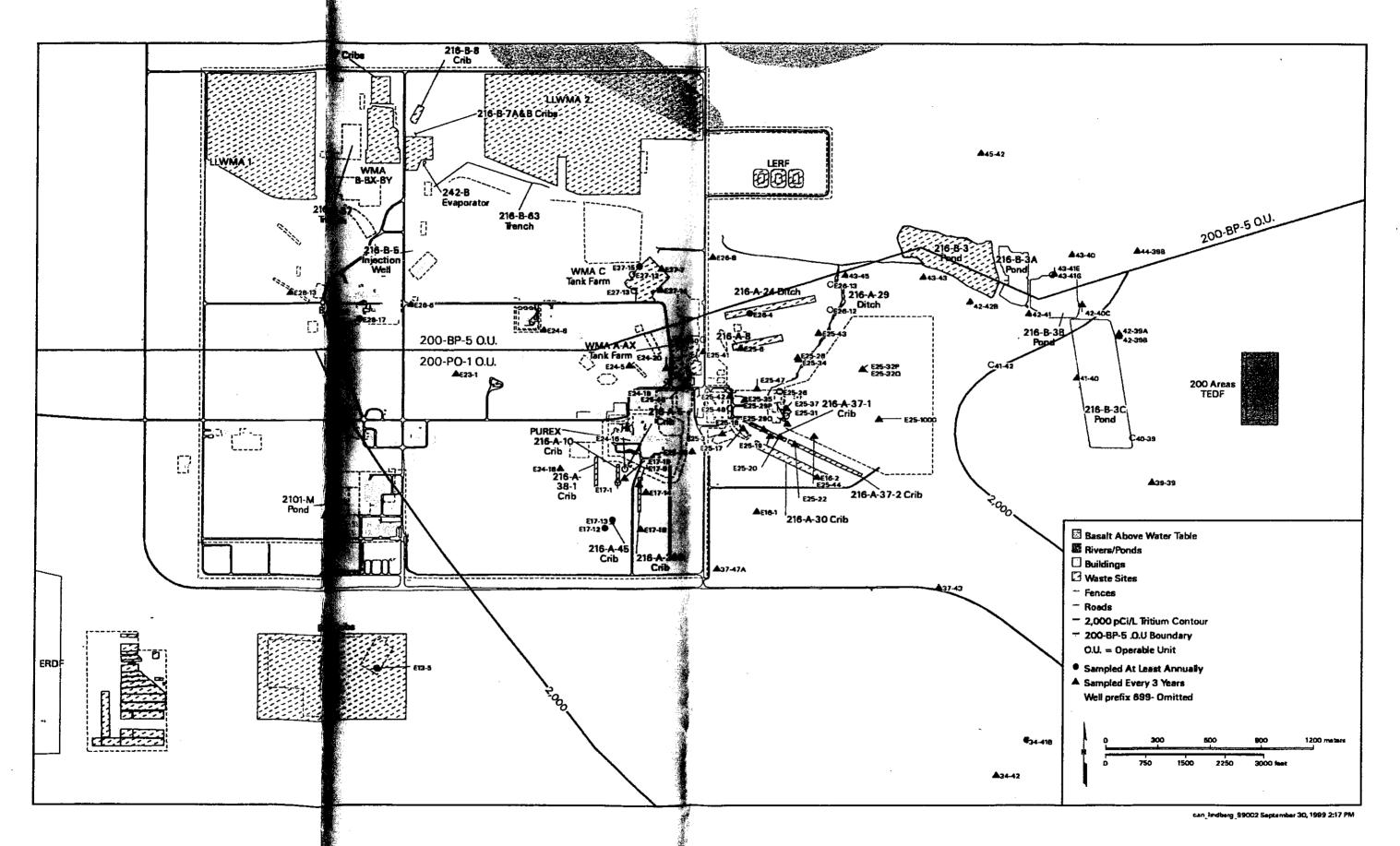


Figure 2. Groundwater Monitoring Well locations: 200-East Area

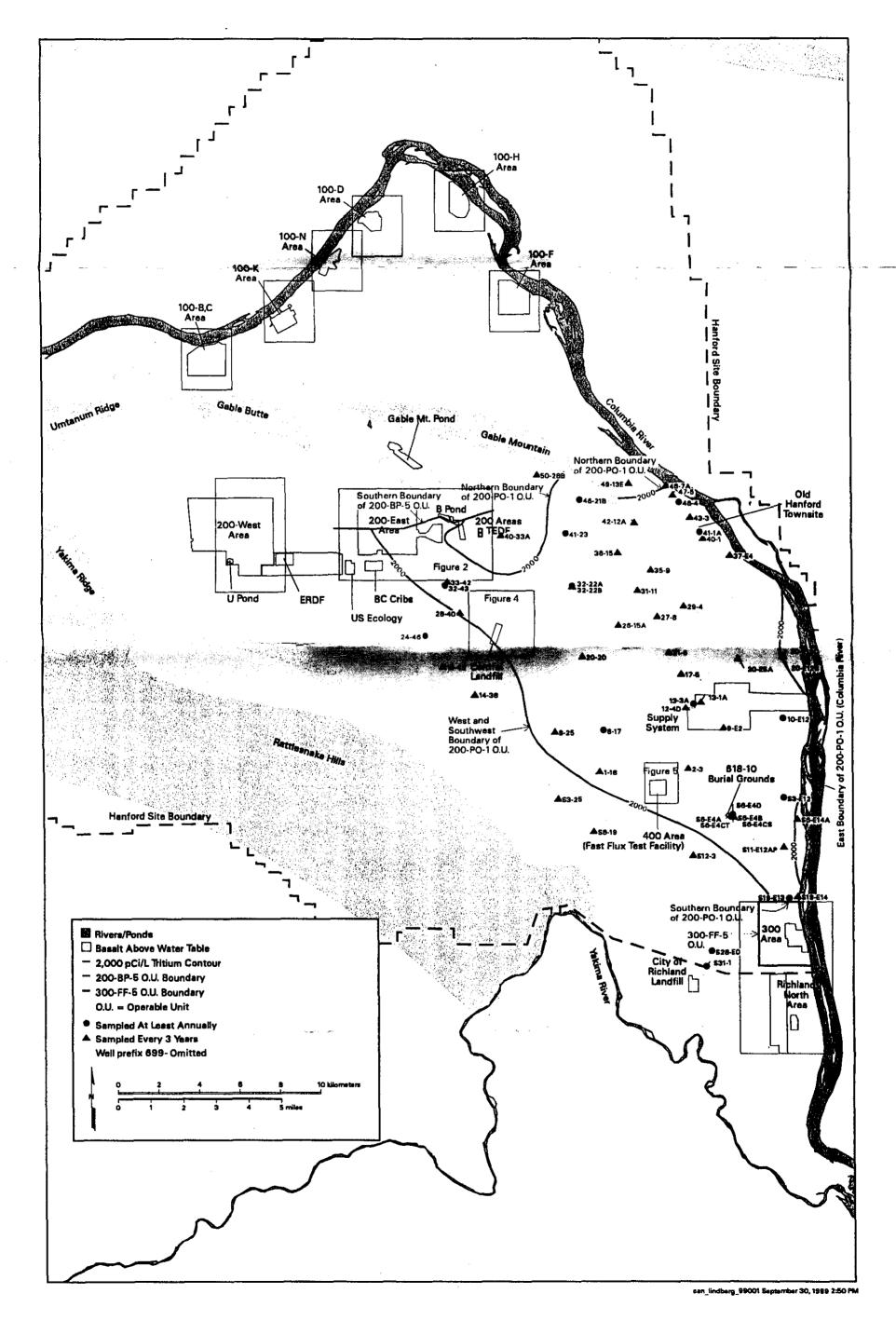


Figure 1. Location of the 200-PO-1 Operable Unit and Associated Monitoring Wells

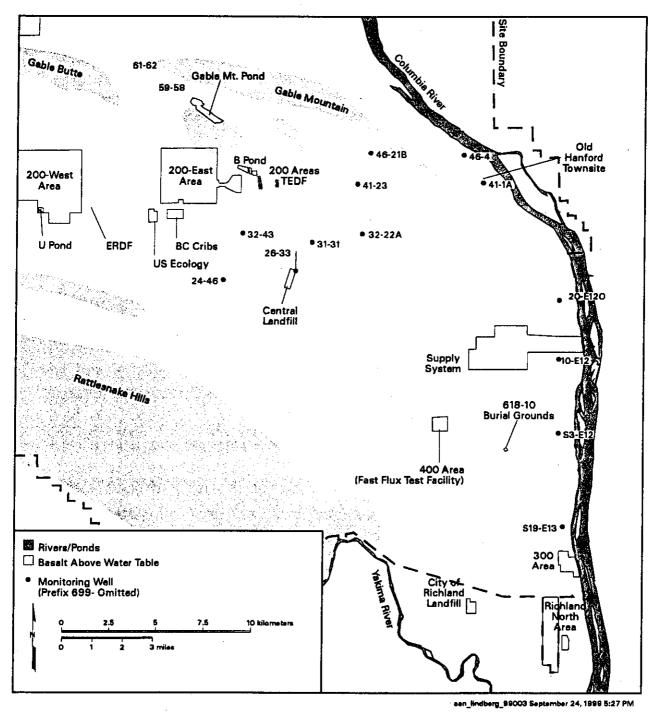


Figure 3. Locations of Guard Wells for the 200-East Area and Columbia River

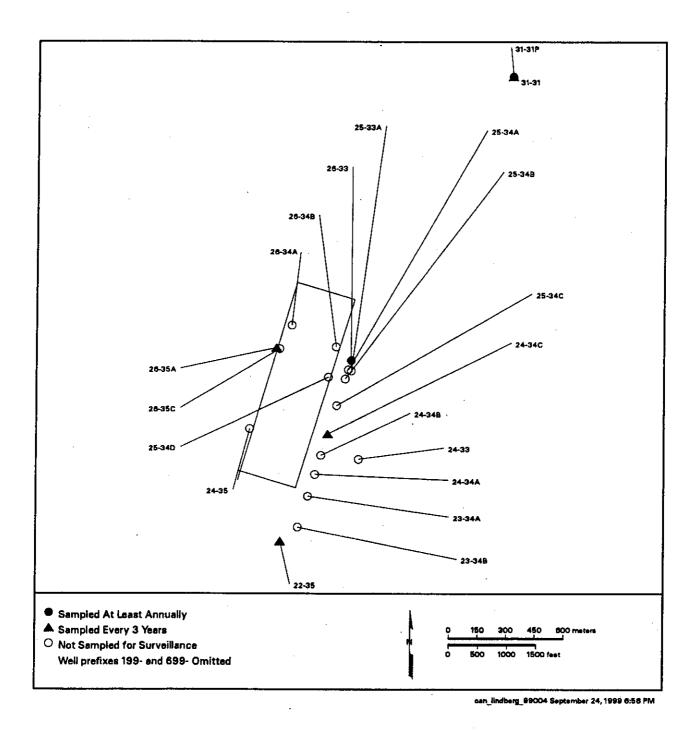


Figure 4. Groundwater Monitoring Well Locations: Central Landfill Vicinity

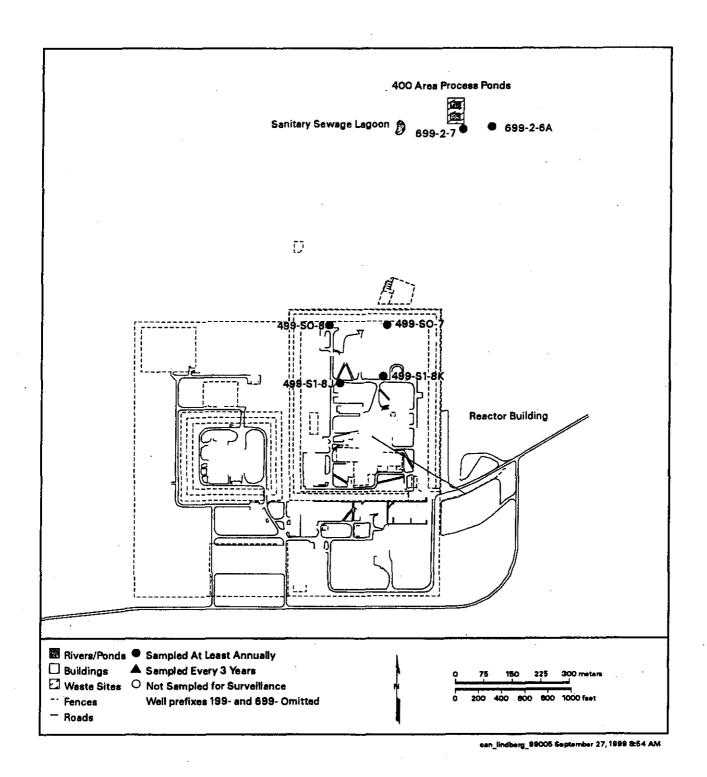


Figure 5. Groundwater Monitoring Locations: 400 Area

APPENDIX A

SAMPLING AND ANALYSIS MATRIX FOR THE AREA WITHIN AND NEAR THE 200-PO-1 OPERABLE UNIT

Appendix A

Sampling and Analysis Matrix for the Area Within and Near the 200-PO-1 Operable Unit

This appendix contains the groundwater sampling and analysis matrix for the 200-PO-1 Operable Unit. It is a subset of Appendix A in PNNL-11989 which contains the integrated sampling and analysis matrix for the entire Hanford Groundwater Monitoring Project. The matrix was designed for use in fiscal year 2000, but also includes wells that will be sampled every 2 or 3 years as discussed in the "Sampling Frequency" section of the main text. The matrix includes well names, sampling frequency, and constituents to be monitored. Additional details, such as schedule, analytical methods, etc., reside in a project database.

The following is a description of the columns in the matrix.

WELL: Wells are listed numerically by digit; e.g. "699-29-4" precedes "699-3-23." Well with a 299-prefix are in the 200 Areas (or near the 200 Areas), and wells with 699 are in the 600 Area. For 699-XX-YY wells, the XX and YY designate Hanford north and west coordinates in thousands of feet from and origin in the southern portion of the Hanford Site. Multiple listings indicate that a well is used for more than one monitoring requirement (or program) and data are shared among users.

Most of the wells monitor the uppermost aquifer. Wells that monitor deeper units are noted in the OTHER/COMMENTS field. However, these designations are incomplete.

PROG (Program): This column indicates the requirements the well is being sampled for. The abbreviations and their associated requirements are as follows:

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980

DOH = State of Washington Department of Health

RCRA = Resource Conservation and Recovery Act of 1976

SURV = Hanford sitewide surveillance (plume and trend tracking)

PROJ (Project): This column gives the subset of the programs listed above. The project designations and their associated explanation are as follows:

200E = 200-East Area

3D = Three-dimensional characterization (deeper well completion)

PUREX = Plutonium-Uranium Extraction Plant waste facilities

SST(A) = Single-shell tanks, waste management area A-AX

A-29 = 216-A-29 ditch

SST(C) = Single-shell tanks, waste management area C

B-PLT = B Plant

400 = 400 Area

TRANSECT = Wells monitoring potential contamination out of 200 Areas (see Figure 3 of main text)

600 = 600 Area

River = Wells monitoring potential contamination near the Columbia River (see Figure 3 of main text)

300-FF-2 = 300-FF-2 Operable Unit

618-10 = 618-10 burial grounds

SWL = Solid Waste Landfill

NRDWL = Non-Radioactive Dangerous Waste Landfill

B-Pond = 216-B-3 Pond

200ZP1IAM = 200-ZP-1 interim action monitoring

FREQ (Sampling Frequency): The following are the definitions for this column:

2-xx, 3-xx = sampled every 2 or 3 years beginning in fiscal year 1999 (-99), 2000 (-00), 2001 (-01), or 2002 (-02)

A = annually

M = monthly

Q = quarterly

SA = semiannually (twice each year)

Records with more than one frequency are sampled for different constituents at different frequencies (e.g., "A/SA" is sampled semiannually for each constituent with a "2" in its column; annually for each constituent with a "1" in its column). The designation "1X4" indicates the number of replicates collected (in this case, four replicates are collected once per year).

The next 20 columns give the most commonly analyzed constituents. Some constituents may be analyzed by several methods; however, those details are not specified in this plan and are included in the project database. The abbreviated ones are spelled out as follows:

Beta = gross beta

Gamma = gross gamma

I-129 = Iodine 129

ICP = Inductively Coupled argon Plasma atomic absorption spectroscopy metals

Sr-90 = Strontium 90

Tc-99 = Technetium 99

TDS = Total Dissolved Solids

TOC = Total organic carbon

TOX = Total organic halides

VOA = Volatile Organics Analysis

Numbers in the constituent columns indicate the number of samples planned for the sample year. Unfiltered and filtered samples for ICP metals are denoted U and F, respectively.

OTHER/COMMENTS: Metals are listed by their standard abbreviations, followed by "F" if filtered. Additional constituents are abbreviated as follows:

Basalt-confined = Deep confined aguifer with the basalt sequence

Amm = Ammonium

Puis = Isotopic plutonium

A = Annual sampling frequency

Hydraz = Hydrazine

SA = Semiannual sampling frequency

Confined Ringold? = Confined aquifer in the Ringold Formation?

CN = Cyanide

Uiso = Isotopic uranium

DO = Dissolved oxygen

Cd = Cadmium

Pb = Lead

 $SO_4 = Sulfate$

Col = Coliform bacteria

COD = Chemical oxygen demand

ABNL = Semi-volatile analysis

299-E27-7	99-E27-15	299-EZ7-15	299-E27-14	299-E27-14	Z99-EZ7-13	299-527-12	200 E26 B	200-526 7	200 636 13	200 525 62	200 625 6	200 525 40	300 E3E 47	299-F25-46	299 E25-46	299-E25-44	299-E25-43	299-E25-42	299-E25-41	299-E25-41	299-EZ5-40	299-E25-37	299-E25-36	299-E25-35	299-E25-35	299-E25-34	299-EZ5-34	299-E25-32Q	775-573-667	35.63.663	300 636 338	11.363.006	299-E25-3	299-E25-29Q	299-E25-29P	299-E25-28	299-E25-28	299-E25-26	222-12-12	200 F25 22	299-E25-20	299-E25-19	299-625-19	299-E25-18	299-E25-17	299-EZ5-17	299-E25-1000		29-624-5	- 23-624-20		299-624-19	299-EZ4-19	299-EZ4-18	299-E24-18	299-E24-16	299-E23-1	1-813-662	6-713-667	299-017-9		700 F17-19	299-€17-19	299-€17-18	299-E17-18	299-E17-14	299-E17-14	299-E17-13	299-E17-12	299-E17-1	:	700 510 3	799_F16_1	299-E13-5	#EE#
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Status of RCRA Groundwater Project Activities at Tank Farms

Presented to Unit Managers Meeting on 3/30/2000

	Groundwater	Groundwater	Status	1	Well Drillir	ng Activitie	s	
WMA	Operable	Monitoring	of	Com	pleted	Plar	nned	Reporting
	Unit	Status	Plans	1998	1999	2000	2001	
A-AX	200-PO-1	Interim Indicator Evaluation	PNNL-13023*	0	0	0	?	Annual Report Quarterly Report
B-BX-BY	200-BP-5	Assessment (1996)	PNNL-13022 (March 2000)	. 1	2	0	0	Annual Report 2 nd Assessment Report (9/2000) Quarterly
С	200-BP-5	Interim Indicator Evaluation	PNNL-13024*	0	0	0	?	Annual Report Quarterly Report
T		Assessment (1993)	PNNL-12057* (January 1999)	2	0	2	1	Annual Report 2 nd Assessment Report (9/2000) Quarterly
TX-TY	200-ZP-1	Assessment (1993)	PNNL-12072* (February 1999)	4	1	2	2	Annual Report 2 nd Assessment Report (9/2000) Quarterly
U		Assessment** (2000)	PNNL-13185 (March 2000)	2	0	0	1	Annual Report 1st Determination Report (9/2000) Quarterly
S-SX		Assessment (1996)	PNNL-12114 (September 1999)	0	4	3	2	Annual Report 2 nd Assessment Report (9/2000) Quarterly

^{*}Draft.
**First determination.

200-ZP-1 DRUMS STORED AT 200-ZP-2

BACKGROUND

1

Information on 4 drums

- 4 full drums currently stored at the ZP-2 Site generated from well maintenance of ZP-1 wells.
- Drum number 200Z-98-0027, 200Z-98-0026, 200Z-99-0004, 200Z-99-0005. All 55 gailon drums.
- Accumulation date/inventory:
 - 200Z-98-0027 (11/06/98), 214' abs plastic pipe from 299W-15-4
 - 200Z-98-0026 (11/06/98), well pump, wire, plactic from 299W-15-4
 - 200Z-99-0004 (11/06/98), well pump, abs plastic pipe, wire 299-18-4
 - 200Z-99-0005 (03/11/99), 140' abs plastic pipe from 299W-18-4
- The wells are identified in the ZP-1 RDR DOE/RL-96-07 as water level and sampling wells. Therefore, these are remediation wells and remediation wastes.
- Waste profile WELLS001 Rev 0 has been prepared to transport this waste to ERDF. The profile has not been approved by ERDF because of the issues surrounding IDW. The waste profile is being further reviewed for completeness by the ERC Waste Management Organization.
- The drums are designated as mixed waste containing F001.
- Drum history:

The drums were being stored in anticipation that a waiver would follow lifting the carbonaceous issues for disposal at ERDF. This letter was obtained on 01/12/99. Since that time, personnel have been working to obtain the appropriate characterization information from HEIS to complete the Waste Profile for shipment to ERDF. The Waste Programs Group had several questions that needed answered related to the data available in HEIS. A profile waste built using this data a couple months ago.

RDR Waste Management Plan, Section 4.2

- Waste covered includes:
 - "Drill cuttings (both dry and saturated), spent GAC, filtered solids, and miscellaneous waste (e.g., contaminanted pumps and filters) that will be generated during the 200-ZP-1 Phase I, II, and III operations."
 - "Purgewater generated during the construction, development, and monitoring of wells."
 - "Drill cuttings and other solid wastes (e.g., soil samples, pumps, contaminated tools) have been or will be generated to support 200-ZP-1 investigations, treatability tests, technology demonstrations, and remedial actions.
- "Solid waste streams will be disposed at the ERDF if they meet the ERDF waste acceptance criteria or can be treated to meet the criteria."

CONCLUSION

 The waste in the 4 drums is remediation waste covered under the 200-ZP-1 Operable Unit Remedial Design Report Waste Management Section. The waste can be stored and then shipped to ERDF.

RECOMMENDATION

- The ERC internal SSWMI, WMI-200-ZP1001, Rev 1 should be revised to include this waste.
- Review the Waste Profile information and revise as appropriate
- Obtain concurrence from the ERDF Waste Disposal Operations Subcontractor and the ERDF Project Engineer on the Waste Profile.
- Prepare shipping papers.
- Send the drums to ERDF per the RDR.

PATHFORWARD FOR 2 DRUMS STORED AT 200-ZP-2

BACKGROUND

- One partially full accumulation drum (200Z990035) that contains GAC from ZP-2 passive systems.
- One partially full 4x4x8 box accumulating waste generated from dismantling one of the active VES system (200Z990032)
- This waste along with other ZP-2 waste is stored at the ZP-2 Central Storage Area.

Action Memo

• Carbon Tetrachloride Action Memo of 1/23/92 proposed VES with GAC recovery in offsite regeneration. 3 systems to be utilized at 216-Z-1A, 216-Z-18, and 216-Z-9.

Authorizing Documents

- Work is generally authorized for the year through monitoring plans and operating plans.
- Document awaiting approval pending discussions on whether to operate the active SVE system. In the mean time, the passive system is operational and sampling is being conducted.
- An agreement form documents the agreement to take knockout water from ZP-2 to ZP-1 for processing.
- ZP-1 RDR
 - Section 4.2.3, "In addition, 200-ZP-2 drill cuttings and associated waste will be managed similar to the 200-ZP-1 waste".
 - Section 4.2, 3rd paragraph: Similar types of investigation-derived waste and remediation waste will be managed in the same manner.

Waste Control Plan

- WCP "Phase 1 and 2 of the 200 W CCl4 Plume ERA" approved by Dennis Faulk on 2/16/94.
- VES units currently location at 216-Z-9 & 216-Z-1a Cribs. Other activities covered by this plan occur throughout 200-ZP-1 & 200-ZP-2 Operable Units.
- Pertains to all CCL4 Expedited Response Action nondrilling waste associated with the Vapor Extraction System, and Integrated Demonstrations.
 - GAC shipped offsite for regeneration
 - Equip/material reused or disposed per process knowledge or sample data.
 - MSW Central landfill or regulated disposal.
 - Liquids disposed per process knowledge or sample data or maybe used as feed stock for other demos.
 - Identified Central waste storage area by Z-18 crib.
 - Excludes drilling waste.

CONCLUSION

• All activities currently being undertaken are part of the Expediated Response Action and are covered under the 1994 approved Waste Control Plan.

RECOMMENDATION

- Continue conducting work under the Waste Control Plan.
- Obtain approval of the FY 2000 Monitoring Plan which addresses implementation of the passive VES systems.
- Update/modify the Waste Control Plan to a Waste Management Plan for all response action and related waste including the disposal pathways.
- Update the internal ERC SSWMI based on the Waste Management Plan.

DISTRIBUTION UNIT MANGERS' MEETING 200 AREA GROUNDWATER AND SOURCE OPERABLE UNITS

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Administrative Record (2) BHI	(H0-09)

Please inform Chloe Brewster – BHI (372-9377) of deletions or additions to the distribution list.